

REMARKS

Claims 1-21 are pending in the above application. Claims 22-38 are added by the foregoing amendment.

Claims 5-7, 9 and 15 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In response to the Examiner's rejection, Applicants have amended claims 5-7, 9 and 15 to identify the particular goods with the associated trademarks. It is believed that such amendments overcome the Examiner's rejections. Reconsideration of claims 5-7, 9 and 15 is thus respectfully requested.

Claims 1-7 and 10-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sage, Jr. (U.S. Patent No. 6,436,476 B1) in view of Adzima et al. (P.C.T. Publication No. WO 91/15434) and further in view of Yamada et al. (U.S. Patent No. 4,427,482).

The Sage Jr. patent is directed to the process for making a composite article and a composition for coating glass and or other fiber reinforcement to improve the fiber's compatibility and adhesion to a polyolefin resin. The process begins by coating fibers with a coating composition including a silane, an optional pH modifying agent, and an optional lubricant, wherein the silane is compatible with one or more ROMP catalysts. As noted in column 5, lines 32-55, the coating composition may include an optional film former such as an epoxy, polyurethane, or epoxy polyurethane. The coated fibers are then contacted with an uncured cycloolefin resin and one or more ROMP catalysts. The mixture is cured to form a composite article.

Yamada teaches a method for preparing a prepreg roving and preforms and molded articles made therefrom. The prepreg roving is made by impregnating a filamentary reinforcing fiber with a resin composition comprising an unsaturated polyester, an unsaturated monomer, and a polyisocyanate compound. To reduce the stickiness of the prepreg roving, a filler such as calcium carbonate may be added to the resin composition or to the roving in a subsequent step. The prepreg roving may then be heated and cured to form a composite part.

Adzima et al. describes a coating composition useful for glass strands having a thermoplastic resin polymer with a film forming polymer that are especially useful as an overwrap for a fiber optical cable. In one embodiment, the powder coated strand is wrapped around a cable or cord and subsequently extruded with a thermoplastic jacket. The heat of the molten thermoplastic polymer in extrusion process causes the thermoplastic resin polymer powder in the overwrap to melt and flow and fuse the jacket to the coating composition.

The present invention of claims 1-21 describes a reinforcing fiber having an chemical treatment, therein forming a string binder. For ease of understanding, Applicants have herein added new claims 22-38 that mirror claims 1-17 but perhaps more clearly describe the reinforcing fiber having an applied chemical treatment further as being a string binder. A string binder, as described in paragraphs [0007-9] of the present application, describes a fibrous material having a resin binder. A preform is then formed from the string binder by chopping the string binder onto a mold and melting the resin binder to bind together the chopped fibrous strands. A reinforced composite may then be made by placing the perform in a mold, injecting a polymer matrix resin onto and within the preform, and curing the polymer matrix resin.


Neither Sage Jr., Yamada, nor Adzima et al., alone or in combination, disclose a string binder, much less do they describe the formation of a composite article made from a string binder. Further, neither Sage Jr., Adzima et al., or Yamada, alone or in combination, disclose or suggest the addition of a filler material to the string binder that reduces surface fiber prominence and blistering of composite articles. As such, claims 1-38 are not obvious over the combination of the cited references. Reconsideration of claims 1-21 and consideration of newly presented claims 22-38 is thus respectfully requested.

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sage, Jr. (U.S. Patent No. 6,436,476 B1) in view of Adzima et al. (P.C.T. Publication No. WO 91/15434) and further in view of Yamada et al. (U.S. Patent No. 4,427,482), as applied to claims 1-7 and 10-21, in view of "Epi-Cure 3253" Product Data Sheet and Hawley's Condensed Chemical Dictionary.

For reasons stated above with respect to claims 1-7 and 10-21, the present invention is directed to a string binder that is not disclosed in Sage Jr., Adzima et al., or Yamada. The additional cited references similarly are not directed to a string binder. As such, claims 8 and 9 are non-obvious in view of the cited prior art. Reconsideration of claims 8 and 9 is respectfully requested.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-38 are allowable. The Examiner is invited to telephone the Applicants' undersigned attorney, at (614) 321-7162 if any unresolved matters remain.

Respectfully Submitted,



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